

REMARKS

Reconsideration and withdrawal of the rejection with respect to all of the claims now in the application (i.e., Claims 23, 25-31, 34-36, 38-39, 61-62, and 64-80) is respectfully requested in view of the foregoing amendments and the following remarks.

Initially, Applicant's attorney wishes to thank Examiner Lan Nguyen and Supervisory Examiner Siconolfi for their courtesy in granting the personal interview to Applicant's undersigned attorney and Dr. Andrea Ticci, Engineering Director of PetroTechnik Limited on October 24, 2008. Although no agreement was reached, Applicant wishes to thank the Examiner and Supervisory Examiner for allowing Dr. Ticci to explain the operation of the fitting, to demonstrate a sample of the product and for consideration of Applicant's position in regard to this matter as discussed and as more fully incorporated in the following remarks.

By this amendment, Applicant has amended the claims to further highlight the novel features of the invention and to better distinguish it over the cited prior art. In particular, Applicant has cancelled, without prejudice, independent Claim 22 directed to the fitting, *per se*, and independent Claim 32 directed to the method of use, and dependent Claims 37, 54-60 and 63. As now defined and as discussed more fully

below, the claims have been limited to the provision of a subterranean fuel storage tank assembly as set forth in independent Claim 38 and a fuel pump assembly as set forth in independent Claim 39, both of which are best illustrated in Fig. 1.

More particularly, Fig. 1 illustrates a typical gas station having a pair of fuel dispensing pumps 1 and 2. These pumps are connected to a fuel storage tank 3 which has a manhole chamber 6 immediately above it. The pumps receive the fuel from the storage tank via pipeline 4. Furthermore, beneath each of the fuel pumps respectively, is a sump 68 and 70. The pipeline is sealed to the chamber walls by means of a novel rigid fitting 22. Furthermore, a rigid fitting is also used to seal the pipeline to each of the sumps. It is respectfully submitted that these novel assemblies are neither disclosed nor suggested in the prior art. The combination of references relied on by the Examiner, namely Rowe in view of Evans, or in further view of Carlesimo, fails to disclose or suggest the subterranean fuel storage assembly and fuel pump assembly as set forth in the claims. Therefore, taking all of the evidence into account, the claims, as now amended, are patentable over the prior art.

In regard to the claims, new Claims 64-80 have been added so that there are now two sets of similar claims which are dependent on Claim 38, namely, the subterranean fuel storage tank assembly and Claim 39, namely, the fuel pump assembly. In particular, the claims formerly dependent on the cancelled independent claims have been amended to be dependent on Claim 38 and so that they have proper antecedent basis. New Claims 64-74 which are dependent on Claim 39 have been

added and correspond to those claims dependent on Claim 38. For the Examiner's ease in reviewing the claims, Applicant provides herewith a set of claims attached hereto as Exhibit A, in which the order of the claims has been rearranged so that the dependent claims follow after each of the independent claims and the dependent claims in each set are presented in the same order.

Additionally, Claim 38 has been amended to define a subterranean fuel storage tank assembly which has a fuel storage tank having a manhole chamber, a fuel pipe and a rigid fitting to seal between the opening in the chamber wall and the pipe. Claim 39 has been amended to define a fuel pump assembly having a fuel pump with a sump chamber, a fuel pipe, and a rigid fitting to seal the opening in the chamber wall and the pipe.

In addition, Claims 38 and 39 have been amended to remove the limitation that the chamber wall is "upright" as the chamber wall penetrated is not always in an upright position. New Claims 77 and 78 have been added to provide for this feature deleted from the main claims. Claims 38 and 39 have also been amended to provide that the chamber wall has "opposite sides" and that the flange has "opposite sides" to provide proper antecedent basis for "one side of the flange" and "one side of the chamber wall."

Additionally, Claims 38 and 39 have been amended to remove the language that the flange contacts the chamber wall "via substantially the whole first surface of the flange" and new Claims 79 and 80 now set forth this preferred embodiment. Claims

38 and 39 have also been amended to recite that the energy transfer means are "disposed adjacent to the surface of the flange" rather than "incorporated in" the flange and Claim 27 and new Claim 67 set forth this preferred embodiment (See, pg. 3, lines 7-8). Claims 38 and 39 have also been amended so that the last clause in the claims has been incorporated into sub-elements (ii) and (iii).

Additionally, the claims have been amended to change the word "fuse" to "bond" in order to encompass both bonding by electrofusion or bonding via an adhesive, as set forth in the dependent claims (See spec. pg. 3, line 10 and pg. 4, lines 10-16). Bonding is defined by Merriam-Webster dictionary (excerpt enclosed as Exh. B) as including a "fusible ingredient that combines, unites, or strengthens" and therefore it encompasses bonding by electrofusion or via an adhesive.

Claim 39 has also been amended to include that the fluid-tight seal, seals against water from leaking into the chamber to maintain the chamber substantially free of water, as similarly set forth in Claim 38 (See spec. pg. 9, lines 6-9). Claim 26 has been amended to remove the "pressure sensitive" adhesive. Claim 34 has been amended to clarify that the wall is the "chamber wall" and the first surface is "of the flange". Claim 28 has been amended to remove that the flange is radial, as this is set forth in the main claims.

Claim 30 has been amended to remove the redundant recitation that the fitting is a "boot" as it is encompassed by the term "sealing member" (See spec. pg. 1, lines 19-22, pg. 4, line 24-pg. 5, line 6 - the boot is one form of the sealing member) and

to clarify that it is secured to both the sleeve and pipe by "clamping means" (See spec. pg. 11, lines 12-14). Claim 31 has been amended to also remove the redundant recitation of a sealing member "and boot" and the reference to the "tubular extension". Claim 36 has been amended to set forth that the adhesive is incorporated "onto" the flange, rather than "into" the flange (see, original Claim 16). Claims 61 and 62 have been amended to remove the duplicate word "and". Lastly, new Claims 75 and 76 were added and provide that the chamber wall, fuel pipe, and fitting are polyethylene (See pg. 8, lines 20-22 and pg. 14, line 7).

It is respectfully submitted that it would not be obvious to one of ordinary skill in the art at the time of the invention to combine the cited references to arrive at the present invention, as amended, as the cited references fail to disclose or suggest some reason why the structure of the present invention would be obvious in light of their teachings.

As previously discussed, the main reference to Rowe teaches away from rigidly welding a fitting to a chamber wall, which was the perceived wisdom in the industry before the present invention was conceived. Rowe (Col. 1, lines 51-54) states:

"Rigidly welding the entrance fitting to the chamber wall is not an ideal arrangement since ground shifting often occurs which could rupture the weld or the pipe." [Emphasis added]

It is clear that Rowe clearly considers the potential problem of weld rupture as such a significant problem that he dismisses the teachings of Evans and instead chooses a

much more complex and expensive arrangement of designing an additional extra seal for a leak testable bulkhead around the conventional gasket seal arrangement. Even assuming arguendo, that Rowe is not considered to teach away from the present invention, it clearly expresses skepticism about rigidly welding a fitting to a chamber wall.

"General skepticism of those in the art -- not amounting to teaching away -- is also "relevant and persuasive evidence" of nonobviousness... In effect, 'teaching away' is a more pointed and probative form of skepticism expressed in the prior art. In any case, the presence of either of these indicia gives insight into the question of obviousness."

*Monarch Knitting Machinery Corp. v. Sulzer Morat GmbH*, 45 USPQ.2d 1977, 1984 (Fed. Cir. 1998).

Therefore, the skepticism expressed in Rowe against rigidly welding a fitting directly to a chamber wall, as presently claimed, is relevant to the present invention and is clearly objective evidence of non-obviousness. Therefore, one of ordinary skill in the art would find no reason to combine Rowe with the electrofusion technology in Evans, as Rowe clearly, at a minimum, expresses skepticism about rigidly welding a fitting to a chamber wall and common and widespread misconceptions in the industry were also against such. As a result, not only is there no reason provided to combine Rowe and Evans, but common sense directs an inventor, like Rowe, to find a different solution as the results of welding were that it would predictably fail over time. Not until the present invention was this misconception dispelled. Furthermore, there is no

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reason to combine these references with Carlesimo, as Carlesimo relates to an underground sewer installation and does not relate to the present invention.

Moreover, Applicant respectfully submits that the Examiner gave insufficient weight to the previously submitted declarations of James Thompson, John Boudry and Andrea Ticci. Pursuant to MPEP §716.01(a),

"[a]ffidavits or declarations, when timely presented, containing evidence of criticality or unexpected results, commercial success, long-felt but unsolved needs, failure of others, skepticism of experts, etc., must be considered by the examiner in determining the issue of obviousness of claims for patentability under 35 U.S.C. 103."

Under MPEP §716.01, when an applicant timely submits evidence traversing a rejection, the examiner must reconsider the patentability of the claimed invention and the ultimate determination of patentability must be based on consideration of the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ.2d 1443 (Fed. Cir. 1992). Furthermore, an affidavit of an Applicant as to the advantages of his or her claimed invention cannot be disregarded for this reason alone. *Ex parte Keyes*, 214 USPQ 579 (Bd. App. 1982); *In re McKenna*, 203 F.2d 717, 97 USPQ 348 (CCPA 1953). Therefore, it is improper to disregard these previously submitted declarations.

USPTO Credit Card Payment form in the amount of \$156.00 is enclosed herewith to cover the official filing fee for the addition of six (6) new claims to the application. The Commissioner is hereby authorized to credit any overpayment or

charge any fee deficiency to Deposit Account No. 50-3990.

In view of the foregoing, it is now believed that all of the claims now in the application are unobvious over the cited art and patentable and allowance thereof at an early date is earnestly solicited.

Respectfully submitted,

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Enclosure: USPTO Form 2038 in the amount of \$156.00  
Exhibit A - Reordered set of claims  
Exhibit B - Dictionary definition  
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# EXHIBIT A

## CLAIMS

Claim 38. (Currently Amended) A subterranean fuel storage tank assembly for use in a petroleum forecourt installation used in the petroleum industry, comprising:

a subterranean fuel storage tank of the type having a manhole chamber with a generally ~~upright and~~ planar manhole chamber wall having opposite sides and a fuel conveying pipework in fluid communication with the fuel storage tank including at least one fuel pipe extending into the chamber through an opening in the chamber wall, through the chamber and out of the chamber so that fuel is not released into the manhole chamber, ~~the improvement comprising:~~ ; and

a rigid fitting in said chamber wall for providing a substantially fluid-tight seal between the opening in the chamber wall and a fuel pipe of the pipework passing through said opening to seal against water from leaking into the manhole chamber to seek to maintain the manhole chamber substantially free of water, ~~said rigid fitting~~ comprising:

- (i) a tubular sleeve adapted to allow the pipe to pass through the sleeve;
- (ii) a flange~~[[,]]~~ having opposite sides and extending radially outwardly from the sleeve~~[[,]]~~ and positioned relative thereto so that the tubular sleeve extends from at least one side of said flange, and one of said sides of said flange having a generally planar first surface of the flange being configured and positioned to directly contact one side of the chamber wall around substantially the whole circumference of the opening via substantially the whole first surface of the flange; and

(iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface of said flange, said energy transfer means being incorporated in the flange and situated adjacent to the first surface of the flange[;]  
~~said energy transfer means and~~ being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the one side of said chamber wall and the flange by causing the wall and the flange to fuse bond together[;]

~~wherein the tubular sleeve extends from at least one side of the flange, said fitting being adapted to be positioned and welded on said one side of the chamber wall.~~

Claim 23. (Currently Amended) A subterranean fuel storage tank assembly fitting according to Claim [[22]] 38, in which the first surface of said fitting comprises a fusible material which, when heated via the energy transfer means, at least partially melts, causing the fitting and the wall to be fused together.

Claim 25. (Currently Amended) A subterranean fuel storage tank assembly fitting according to Claim [[22]] 38, in which the fitting is adapted for use with a wall which is of a material which is not suitable for being attached to the fitting by electrofusion, the first surface of the fitting incorporating an adhesive of a type which is activated by heat, wherein the heating of the first surface by the energy transfer means

activates the adhesive and thereby bonds the fitting to the wall.

Claim 26. (Currently Amended) A fitting subterranean fuel storage tank assembly according to Claim 25, in which the adhesive is a member selected from the group consisting of a thermoplastic, thermoset[[,]] and cross-linking ~~and pressure-sensitive~~ adhesive.

Claim 27. (Currently Amended) A subterranean fuel storage tank assembly fitting according to Claim [[22]] 38, in which the energy transfer means of said fitting comprises a heating wire which is embedded within the first surface.

Claim 28. (Currently Amended) A subterranean fuel storage tank assembly fitting according to Claim [[22]] 38, in which the sleeve of said fitting is of a substantially circular cross-section, ~~and the flange is radial~~.

Claim 29. (Currently Amended) A subterranean fuel storage tank assembly fitting according to Claim [[22]] 38, in which the fitting includes terminals for connecting the energy transfer means to a current supply.

Claim 30. (Currently Amended) A subterranean fuel storage tank assembly fitting according to Claim [[22]] 38, wherein the fitting further comprises ~~a member of the~~

~~group consisting of clamping means and a sealing member and a boot adapted to form a fluid tight seal between the sleeve and the pipe and which is secured to the tubular sleeve and pipe by means of said clamping means mounting over the tubular extension of the tubular sleeve.~~

~~Claim 31. (Currently Amended) A subterranean fuel storage tank assembly fitting according to Claim 30, in which ~~one of the group comprising the said sealing member and boot~~ is resilient, and the tubular sleeve is adapted to receive one of the group comprising the sealing member and boot on the tubular extension of the tubular sleeve.~~

Claim 34. (Currently Amended) A method subterranean fuel storage tank assembly according to Claim ~~[[32]]~~ 38, in which the materials constituting the chamber wall and the first surface of the flange are such that their surfaces are fused together by a process of electrofusion.

Claim 35. (Currently Amended) A subterranean fuel storage tank assembly method according to Claim ~~[[32]]~~ 38; in which the ~~method also~~ fitting includes providing an adhesive which is activated by said heating to cause the fitting to be bonded to the wall.

Claim 36. (Currently Amended) A subterranean fuel storage tank assembly method according to Claim [[32]] 35, in which [[án]] the adhesive is incorporated into onto the first surface ~~on~~ of the flange.

Claim 61. (Currently Amended) A subterranean fuel tank assembly according to Claim 38, wherein said tubular sleeve is further adapted to pass through the opening in the chamber wall and [[and]] wherein the tubular sleeve extends from both sides of the flange such that, in use, the fitting can be positioned in one position on the inside of the chamber wall and in a reversed, alternative position, can be positioned on the outside of the chamber wall.

Claim 75. (New) A subterranean fuel storage tank assembly according to Claim 38, wherein said chamber wall, fuel pipe, and fitting is polyethylene.

Claim 77. (New) A subterranean fuel storage tank assembly according to Claim 38, wherein said chamber wall is upright.

Claim 79. (New) A subterranean fuel storage tank assembly according to Claim 38, wherein said flange contacts the chamber wall via substantially the whole first surface.

Claim 39. (Currently Amended) A fuel pump assembly, comprising:

a fuel pump having a sump chamber with a generally ~~upright and~~ planar subterranean sump chamber wall having opposite sides and having fuel conveying pipework in fluid communication with the pump and extending into the chamber through an opening in the chamber wall, through the chamber and out of the chamber~~[[,]]~~, and

~~there being provided in the chamber wall~~

a rigid fitting in the chamber wall for providing a substantially fluid-tight seal between the opening in the subterranean chamber wall and a pipe of the pipework passing through said opening to seal against water from leaking into the chamber to seek to maintain the chamber substantially free of water, ~~said rigid fitting comprising:~~

- (i) a tubular sleeve adapted to allow the pipe to pass through the sleeve;
- (ii) a flange~~[[,]]~~ having opposite sides and extending radially outwardly from the sleeve[[,]] and positioned relative thereto so that the tubular sleeve extends from at least one side of said flange, and one of said sides of said flange having a generally planar first surface of the flange being configured and positioned to directly contact one side of the chamber wall around substantially the whole circumference of the opening via substantially the whole first surface of the flange; and
- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface of said flange, said energy transfer means being

~~incorporated in the flange and~~ situated adjacent to the first surface of the flange[[:]]  
~~said energy transfer means~~ and being adapted to heat the first surface of the flange  
in order to form a substantially fluid tight seal between ~~the~~ one side of said chamber  
wall and the flange by causing the wall and the flange to ~~fuse~~ bond together[[:]]

~~wherein the tubular sleeve extends from at least one side of the flange, said~~  
~~fitting being adapted to be positioned and welded on said one side of the chamber~~  
~~wall.~~

Claim 64. (New) A fuel pump assembly according to Claim 39, in which the first surface of said fitting comprises a fusible material which, when heated via the energy transfer means, at least partially melts, causing the fitting and the wall to be fused together.

Claim 65. (New) A fuel pump assembly according to Claim 39, in which the fitting is adapted for use with a wall which is of a material which is not suitable for being attached to the fitting by electrofusion, the first surface of the fitting incorporating an adhesive of a type which is activated by heat, wherein the heating of the first surface by the energy transfer means activates the adhesive and thereby bonds the fitting to the wall.



Claim 66. (New) A fuel pump assembly according to Claim 39, in which the adhesive is a member selected from the group consisting of a thermoplastic, thermoset and cross-linking adhesive.

Claim 67. (New) A fuel pump assembly according to Claim 39, in which the energy transfer means of said fitting comprises a heating wire which is embedded within the first surface.

Claim 68. (New) A fuel pump assembly according to Claim 39, in which the sleeve of said fitting is of a substantially circular cross-section.

Claim 69. (New) A fuel pump assembly according to Claim 39, in which the fitting includes terminals for connecting the energy transfer means to a current supply.

Claim 70. (New) A fuel pump assembly according to Claim 39, wherein the fitting further comprises clamping means and a sealing member adapted to form a fluid tight seal between the sleeve and the pipe and which is secured to the tubular sleeve and pipe by means of said clamping means.

Claim 71. (New) A fuel pump assembly according to Claim 70, in which said sealing member is resilient.

Claim 72. (New) A fuel pump assembly according to Claim 39, in which the materials constituting the chamber wall and the first surface of the flange are such that their surfaces are fused together by a process of electrofusion.

Claim 73. (New) A fuel pump assembly according to Claim 39, in which the fitting includes an adhesive which is activated by said heating to cause the fitting to be bonded to the wall.

Claim 74. (New) A fuel pump assembly according to Claim 73, in which the adhesive is incorporated onto the first surface of the flange.

Claim 62. (Currently Amended) A fuel pump assembly according to Claim 39, wherein said tubular sleeve is further adapted to pass through the opening in the chamber wall and [[and]] wherein the tubular sleeve extends from both sides of the flange such that, in use, the fitting can be positioned in one position on the inside of the chamber wall and in a reversed, alternative position, can be positioned on the outside of the chamber wall.

Claim 76. (New) A fuel pump assembly according to Claim 39, wherein said chamber wall, fuel pipe, and fitting is polyethylene.

Claim 78. (New) A fuel pump assembly according to Claim 39, wherein said chamber wall is upright.

Claim 80. (New) A fuel pump assembly according to Claim 39, wherein said flange contacts the chamber wall via substantially the whole first surface.

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# EXHIBIT B

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## bond

Entries 1 to 10 of 20. [Next 10](#)

- 1 bond (noun)
- 2 bond (verb)
- 3 bond (adjective)
- bond paper

Main Entry: **'bond** **4**

Pronunciation: \ˈbānd\

Function: *noun*Etymology: Middle English *band, bond* — more at [BAND](#)

Date: 12th century

- 1 : something that binds or restrains : [FETTER](#)
- 2 : a binding agreement : [COVENANT](#)
- 3 a : a band or cord used to tie something b : a material or device for binding c : an attractive force that holds together the atoms, ions, or groups of atoms in a molecule or crystal d : an adhesive, cementing material, or fusible ingredient that combines, unites, or strengthens
- 4 : a uniting or binding element or force : [TIE](#) <the *bonds* of friendship>
- 5 a : an obligation made binding by a money forfeit ; also : the amount of the money guarantee b : one who acts as bail or surety c : an interest-bearing certificate of public or private indebtedness d : an insurance agreement pledging surety for financial loss caused to another by the act or default of a third person or by some contingency over which the third person may have no control
- 6 : the systematic lapping of brick in a wall
- 7 : the state of goods made, stored, or transported under the care of bonded agencies until the duties or taxes on them are paid
- 8 : a 100-proof straight whiskey aged at least four years under government supervision before being bottled — called also *bonded whiskey*
- 9 : [BOND PAPER](#)

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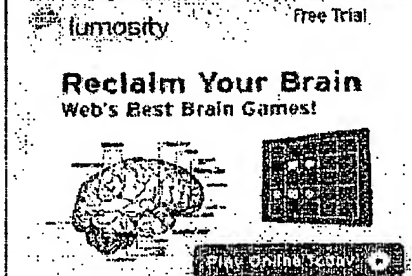
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Merriam-Webster Online. 6 November 2008  
<<http://www.merriam-webster.com/dictionary/bond>>

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bond. (2008). In Merriam-Webster Online Dictionary.  
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